

## IN THE CLAIMS

1. (cancelled)
2. (cancelled)
3. (cancelled)
4. (cancelled)
5. (cancelled)
6. (cancelled)
7. (cancelled)
8. (cancelled)
9. (cancelled)
10. (new) A vibrating machine, for extracting, mixing and separating organic and inorganic materials, both in liquid and powder form, in particular for preparing samples for analyzing DNA, wherein said vibrating machine comprises a framework slidably supporting two opposite supporting shoulders holding therein a respective test tube vessel containing a plurality of test tubes, said supporting shoulders being coupled to a pair of parallel guides rigid with said framework of said vibrating machine, each said supporting shoulder being rigidly coupled to cam follower means affected by a cam in turn driven by a variable speed electronically controlled electric motor, to cause said test tube supporting shoulders to perform a rectilinear symmetrically opposite reciprocating movement, and wherein said cam follower means are rigidly coupled by rigid arm means to said shoulders.
11. (new) A vibrating machine, according to claim 10, wherein said motor shaft on which is mounted a pulley, thereon is entrained a transmission belt rotatively driving a second pulley keyed on a second shaft supporting said cam.
12. (new) A vibrating machine, according to claim 10, characterized in that said cam is a desmodromic cam, having an inner contour and a different outer contour, thereon respectively slide inner follower rollers and outer follower rollers of said cam follower means.
13. (new) A vibrating machine, according to claim 12, wherein a said inner follower roller is pivoted, together with a respective said outer follower roller, to an arm rigid with a said supporting shoulder, whereas the other said inner follower roller is pivoted, together with a respective outer follower roller, to a second arm rigid with the other said

supporting shoulder.

14. (new) A vibrating machine, according to claim 10, wherein said cam is a non-desmodromic cam, comprising a single outer contour, thereon slide two cam followers associated with respective arms rigidly connected to said supporting shoulders, said supporting shoulders being in turn connected by a pair of return springs, allowing said cam follower means to follow the cam contour.